

REMARKS/ARGUMENTS

Claims 5-7, 9-11, 13-35, 43-51 and 55-78 are pending in the application.

Claim 13 is amended to depend from claim 5 to address the claim objection noted in the Official Action.

Claims 5-7 and 9-11 stand rejected as being anticipated by TOMITA 5,990,477.

Reconsideration and withdrawal of the rejection are respectfully requested because the reference does not disclose or suggest that a piezoelectric element is electrically isolated from the body (of the probe) as recited in claim 5 of the present application.

By way of example, page 6, lines 14-18 of the present application disclose that piezoelectric element 4 is electrically isolated from the probe 3.

Column 3, line 14 through column 4, line 3 of TOMITA, for example, disclose that probe 1 is mechanically held by spring pressure to quartz oscillator 4 so that the probe and quartz oscillator operate as a unit. Column 4, lines 59-64 of TOMITA further disclose that when an AC voltage is applied to the PZT device, the piezoelectric effect induces an electric charge in the quartz oscillator. Since spring pressure holds the probe 1 to the quartz oscillator 4 and these elements operate as a unit, there is both a mechanical and electrical connection between the

quartz oscillator, the piezoelectric element and the probe. Accordingly, TOMITA does not disclose or suggest that the piezoelectric element is electrically isolated from the body as recited in claim 5 of the present application. As the reference does not disclose that which is recited, the anticipation rejection is not viable. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 6, 7, 10, and 13 depend from claim 5 and further define the invention and are also believed patentable over the cited prior art.

Claims 14-35, 43-51 and 55-78 are rejected as unpatentable over TOMITA in view of ADDERTON et al. 6,172,506 and further in view of WILLIAMS et al. 6,210,982. This rejection is respectfully traversed.

Figure 1 of ADDERTON et al. shows probe 15 contacting lip oscillator 1. The lip oscillator 1 of ADDERTON et al. corresponds to the piezoelectric element of the present invention. ADDERTON et al. do not teach or suggest that the lip oscillator is electrically isolated from the probe. As set forth above, the oscillator in TOMITA electrically contacts the probe. WILLIAMS et al. is only cited for the teaching that an AC bias voltage applied to the substrate is held constant and the signal is a change in depletion capacitance. WILLIAMS et al. do not teach or suggest that the vibrating unit is electrically isolated

from the probe as recited in claim 14 of the present application. The above-noted feature is missing from each of the references, is absent from the combination, and thus is not obvious to one having ordinary skill in the art.

Claims 15-35 depend from claim 14 and further define the invention and are also believed patentable over the cited prior art.

Claims 43 and 44 recite the steps of electrically isolating the probe from the vibrating unit.

As noted above, both TOMITA and ADDERTON et al. do not teach or suggest that the probe is electrically isolated from the oscillator (vibrating unit) and WILLIAMS et al. do not teach or suggest this feature. Accordingly, claims 43 and 44 are also believed patentable over the cited prior art.

Claims 45-51 depend from one of claims 43 and 44 and are also believed patentable over the cited prior art.

Claim 55 provides that the vibrating unit is electrically isolated from the conductive probe.

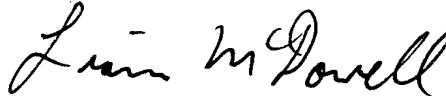
As noted above, neither TOMITA nor ADDERTON et al. nor WILLIAMS et al. teach or suggest that the oscillator vibrating unit is electrically isolated from the conductive probe as recited in claim 55 of the present application. Accordingly, claim 55 and claims 56-78 which depend therefrom are also believed patentable over the cited prior art.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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